

REMARKS

A new substitute Specification has been provided.

Claims 122-141 stand allowed.

The Claims withdrawn from consideration have been cancelled without prejudice or disclaimer.

Claims 55-57 were rejected under Section 112, second paragraph. Applicants respectfully traverse this rejection.

Applicants first note that all of the structures recited in Claims 55-57 are biologic. With regard to the particular reference to "cement-cement plate", Applicants note that this refers to the attachment mechanism of, for example, barnacles (see, for example, the Specification at Page 54, lines 24-31). Augmentation (e.g., to cause certain organisms to attach better through their cement) or disruption of the cement is possible according to the techniques of the claimed invention.

With regard to the definition of "augment" Applicants direct the attention of the Examiner to Page 8, lines 28-31. For the convenience of the Examiner, these lines are reproduced immediately below:

"Augmentation as used herein encompasses beneficial effects on the biologic structure. Such augmenting of functions or enhancing effects include but are not limited to enhancement of growth, reproduction, regeneration, embryogenesis, metabolism, fermentation, and the like."

Accordingly, Applicants respectfully submit that the language used in the Claims is definite and precise.

Claims 45-46, 52, 54-56 and 105 were rejected under §102(b) as being anticipated by Findl (U.S. 4,850,959). This rejection is respectfully traversed.

Findl does not disclose or suggest the claimed **"targeting the biologic structure by inducing acoustic resonance"** (see Claim 45). Rather, Findl discloses at column 3, lines 2-11 what a resonant frequency is. In particular, Findl discloses the following at column 3, lines 2-6:

By "resonant frequency electromagnetic fields", as used in the specification and appended claims, is meant any waveform, having a fundamental or modulation frequency of 15 Hz, or an odd multiple thereof, up to about the 19th harmonic, i.e., about 285 Hz.

Findl apparently observed that these frequencies (i.e., 15 Hz, etc.) somehow assist in, for example, calcium ion cellular transport. However, there is no disclosure or suggestion in Findl of the claimed **"targeting the biologic structure by inducing acoustic resonance"**.

The following passage in the present specification discusses the inducing of acoustic resonance: Specifically, Page 8, lines 8-10 recite the following:

"The resonant acoustic frequency of a biologic structure may be determined by performing resonant acoustic spectroscopy using methods and systems well known in the art.

Moreover, the present invention teaches at Page 11, lines 16-19 the following:

"The targeted structure can be induced into acoustic resonance by introducing acoustic energy including at least one resonant acoustic frequency, electro-magnetic energy equivalent to the resonant acoustic frequency, and/or electromagnetic energy pattern equivalent to the acousto-EM signature."

Moreover, the present Specification teaches at Page 13, lines 10-18 the following:

"In another embodiment of the present invention a system for augmenting and/or disrupting a targeted biologic structure comprises means for applying acoustic energy including a previously determined resonant acoustic frequency to induce acoustic resonance in the biologic structure, the acoustic energy being applied at a sufficient power input to affect functions of the biologic structure. Alternatively, the targeted structure may be induced into acoustic resonance by providing electromagnetic energy equivalent to the resonant acoustic frequency or the acousto-EM signature that was previously determined, such as direct and alternating current, electric and magnetic fields, and electromagnetic energy."

Accordingly, Applicants respectfully submit that the "resonant frequency electromagnetic fields" recited in Findl do not anticipate the claimed **"targeting the biologic structure by inducing acoustic resonance"**.

Claims 47-48, 58 and 84 were rejected under §103(a) as being unpatentable over Findl. This position is respectfully traversed. Specifically, as discussed above, Findl fails to disclose or suggest the importance of the claimed **"targeting the biologic structure by inducing acoustic**

resonance". Rather, Findl only discloses generally the application of frequencies of 15 Hz or odd multiples thereof up to about the 19th harmonic.

Claims 49-51, 53 and 57 were rejected under §103(a) as being unpatentable over Findl in view of Azure (U.S. 5,908,444). This rejection is respectfully traversed. Specifically, as stated above Final fails to disclose or suggest the importance of the claimed **"targeting the biologic structure by inducing acoustic resonance"**. Rather, Findl only discloses generally the application of frequencies of 15 Hz or odd multiples thereof up to about the 19th harmonic. Moreover, Azure does not overcome the deficiencies of Findl.

The references made of record are noted, however, none of the cited references alone or in combination disclose or suggest the claimed **"targeting the biologic structure by inducing acoustic resonance"**.

Accordingly, in view of the Amendments and Remarks contained herein, a Notice of Allowance directed to Claims 45-58, 84, 105 and 122-141 is respectfully requested.

Should the Examiner have any questions regarding this submission, the Examiner is invited to telephone Applicants' undersigned representative. Moreover, should the Examiner believe that the pending Claims are not in condition for Allowance, the Examiner is invited to telephone Applicants' undersigned representative.

Respectfully submitted,



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May 5, 2003